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(21) International Application Number: PCT/US99/23253 (22) International Filing Date: 5 October 1999 (05.10.99) (30) Priority Data: 60/103,760 9 October 1998 (09.10.98) US (71) Applicant (for all designated States except US): MERCK & CO., INC. [US/US]; 126 East Lincoln Avenue, Rahway, NJ 07065 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): PETRUKHIN, Konstantin [RU/US]; 126 East Lincoln Avenue, Rahway, NJ 07065 (US). CASKEY, C., Thomas [US/US]; 126 East Lincoln Avenue, Rahway, NJ 07065 (US). (74) Common Representative: MERCK & CO., INC.; 126 East Lincoln Avenue, Rahway, NJ 07065 (US).		(81) Designated States: CA, JP, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: DELTA 6 FATTY ACID DESATURASE (57) Abstract Novel human DNA sequences that encode the gene CYB5RP, a delta 6 fatty acid desaturase, are provided. Provided are genomic CYB5RP DNA as well as cDNA that encodes the CYB5RP protein. Also provided is CYB5RP protein encoded by the novel DNA sequences. Methods of expressing CYB5RP protein in recombinant systems are provided. Also provided are CYB5RP methods that identify activators and inhibitors of CYB5RP protein.		

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/23253

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : A61K 39/395; C12P 7/62; C12N 9/02, 15/00; C07H 19/00 US CL : 435/135, 189, 320.1, 452.3; 424/130.1; 536/23.2 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 435/135, 189, 320.1, 452.3; 424/130.1; 536/23.2 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Please See Extra Sheet. Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Medline Search terms: CYB5RP, delta-6 fatty acid desaturase, human or homo sapiens.		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Database GenBank, Accession AAC23396, submitted by LAMERDIN, JE, publicly available on 12 June 1998, see entire record.	1-15 protein seq. Not related to Seq ID 3
X	Database GenBank, Accession AC004770, submitted by LAMERDIN, JE, publicly available on 12 June 1998, see entire record, especially identification of CDS at about line 50.	1-15 → Only partial match
X,P	Database GenBank, Accession AAD31282 submitted by LI et al, publicly available on 19 May 1999, see entire record.	1-15 - post dated
X	WO 98/39446 A2 (HUMAN GENOME SCIENCES, INC.) 11 September 1998, see entire document, especially SEQ ID No:63.	1-15
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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Date of the actual completion of the international search 24 FEBRUARY 2000		Date of mailing of the international search report 15 MAR 2000
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B. FIELDS SEARCHED

Documentation other than minimum documentation that are included in the fields searched:

Because a CRF was not made available at the time of the search, Database GenBank Accession AF134404, which appears to encode the same desaturase as set forth in Figures 3A-C of the instant application, was searched against all available amino acid and nucleic acid databases.